The open air treatment of consumptives and those who are threatened with tuberculous disease has given much better results than any other. Particularly in Germany, and to some extent in this country, such treatment has been systematized in "sanitaria" for consumptives. Here the patients have the advantage of a life under medical regulation, nutritious food, and such exercise or rest as each case requires; but the chief curative agent is an abundance of fresh air. Even in cold winter weather, patients, after a period of gradual habituation, and always guided by the judgment of the physician, pass almost the whole day in the open air, walking or sitting, or lying on resting places comfortably wrapped in blankets and furs. The results obtained in these institutions have been very successful even in those with climatic conditions less favorable than those of many parts of Maine. An abundance of pure air is the all important thing.

DISINFECTING SOLUTIONS.

Solution 1.

Carbolic acid (pure liquefied)	7 ounces.
Water	1 gallon.

Mix. This is approximately a 5-per cent solution. For the disinfection of clothing this solution, mixed half and half with water, will do.

Solution 2.

Lysol	5 ounces.
Water	1 gallon.

Mix. This may be used as a substitute for solution 1, one-half the strength sufficing for uncolored clothing. Many colors are changed by it.

Solution 3.

Solutol (crude or pure)	½ pint.
Water	2 or 3 gallons.

Mix. This is a very efficient disinfectant for excreta, tuberculous sputum, and gross disinfection generally. If to be used in dwelling houses, or wherever the odor of the crude product would be offensive, pure solutol should be used.

Solution 7.

Solution of formaldehyd (formalin)	6 ounces.
Water	1 gallon.

Mix. This mixture contains a little less than 2 per cent of formaldehyd.

It is a good plan to dissolve 4 or 5 tablespoonfuls of common salt in each quart of solution 1 or solution 2, thereby increasing considerably the disinfecting power of the solution.

[Reports to the Surgeon-General United States Marine-Hospital Service.]

Infection of vessels with yellow fever at Panama.

COLUMBIA RIVER QUARANTINE,
Astoria, Oreg., January 16, 1900.

SIR: I have the honor to report certain facts concerning the yellow fever infection of vessels at Panama, as learned from vessels arriving at this station during the past three months. During the past summer, yellow fever broke out on apparently an unusually large number of

vessels lying at anchor at Panama, and of those bound for this country, 6 entered this port. Of the 6, 4 had yellow fever aboard while at Panama. The record for the 4 was bad—49 cases and 15 deaths. On 1 vessel, the *Edenballymore*, there were 18 cases and 6 deaths from yellow fever, the captain, his wife, and mate being numbered among the dead.

It has been my endeavor to attempt to learn the source of infection, and it may be of some use and interest to state what could be learned on this point. The history of one ship is approximately that of all six. All went to Panama with coal (either from Newcastle or Cardiff), and discharged coal at one of the four little island coaling stations, situated from 2½ to 3 miles offshore and 3 miles from Panama; each took in rock ballast from another island 8 miles away and sailed without cargo for this port. I would respectfully call attention to the rough chart, inclosed herewith, showing the situation of the islands. The four small ones—Flamenco, San José, Perico, and Ilenao—are said to be mere coaling stations. Flamenco is the main one, and has on it only the coal bunkers and other buildings of the Pacific Mail Steamship Company, with about 200 employees, many of whom live in Panama. It is said there has been no yellow fever among the employees on any of these islands this last summer. The British steamship *Haddon Hall*, which is the last arrival from Panama, gives a clear history, to which I would invite your attention, as the history of the other vessels is similar to this. The *Haddon Hall* arrived at Panama September 14, anchoring a few ship's lengths off the island of Flamenco, and began discharging her cargo of coal into lighters. The captain states that there was no communication with the island or shore on the part of the crew.

Learning that yellow fever had broken out on another ship which had been unloading coal at the same place, he decided to have no help from the island come aboard, as did the other ship, and set the crew to unloading the cargo. On October 5, twenty days thereafter, 2 men were taken sick with yellow fever. The island authorities at once sent the ship to the island of Taboga, 8 miles away, claiming it was for their own protection; and the 2 cases were removed to a hospital there. After a week, during which there were no more cases, the ship was brought back to Flamenco and resumed discharging coal. Three days thereafter, 3 cases of yellow fever occurred in one night, 2 more the next morning, and 3 more the next day. The ship was then sent back to Taboga, the cases removed, and the ship discharged her cargo into lighters without returning to Flamenco. From that date, October 16, there was no more fever. There occurred in all 10 cases and 3 deaths of yellow fever. The ship sailed November 12 and arrived here January 12 without having any further sickness.

The ballast, consisting of clean hard rock, was taken on from Taboga after the cases of fever had occurred. No help from ashore came aboard the vessel until after the crew was reduced by yellow fever. The water supply was from Taboga, and is the same used since the last case of sickness occurred without causing further trouble. The captain states that he neither saw nor heard of a case of fever on the island of Flamenco, and while he went to the city of Panama at times, he always returned before night, did not visit any sick, and was not sick himself while in port.

The history of the other infected ships—the *Edenballymore*, 18 cases and 6 deaths; *Glenholm*, 13 cases and 6 deaths; *Aldebaran*, 8 cases—is practically the same as that of the *Haddon Hall*. The fever aboard the *Glenholm*, which also had 1 case of yellow fever en voyage, did

not break out, however, until the process of taking in ballast had begun, and I regarded this as the probable source of infection until the other ships arrived with a history showing infection previous to the taking in of ballast. The ballast was obtained from the island of Taboga, which, it is said, is free of yellow fever except at the quarantine, and is used for this reason as a safe and cool place for summer residence for the better class of citizens of Panama.

It seems, therefore, almost certain that the infection was carried by the air to these ships. If it is true that the little island coaling stations were not infected, as stated by the ship's captain (which I doubt), it would appear that the only other source of infection was from offshore winds, in which case we would have evidence of the rather remarkable circumstance of yellow-fever infection being carried a distance of at least 2½ miles by winds.

It might be of some interest from a sanitary point of view, as well as affording the information whereby vessels bound for the United States during the coming summer can be protected against similar infection by yellow fever, to find out whether the four island coaling stations at Panama are infected with yellow fever.

Respectfully,

HILL HASTINGS,
Assistant Surgeon, U. S. M. H. S.

Smallpox in Cairo, Ill., and Paducah, Ky.

CAIRO, ILL., *January 21, 1900.*

SIR: I have the honor to report for the week ended January 20, 1900, 5 new cases of smallpox in this city, and no deaths, making 39 cases and 4 deaths reported to date.

The master of one of the steamers making daily trips between here and Paducah ascertained from the mayor of Paducah that there are 18 or 19 cases of smallpox in that city.

Respectfully,

JOHN MILTON HOLT,
Assistant Surgeon, U. S. M. H. S., In Command.

Case of smallpox on the tug Helen at Cape Charles.

CAPE CHARLES QUARANTINE STATION, *January 24, 1900.*

SIR: I have the honor to make the following detailed report concerning the case of smallpox—already reported—on board the Chesapeake and Ohio tug *Helen*, from Newport News, Va.:

My first information concerning the case was received about the middle of the day, January 21, when the local quarantine officer from Newport News came aboard the *Helen*, within hailing distance of the *Jamestown* and informed me that he had a case of smallpox on board; that the city board of health of Newport News would not admit to the pesthouse and that he knew nothing else to do but to turn everything over to the Marine Hospital Service. Consequently the *Helen* was anchored here in the harbor, and I being unable to communicate with the Bureau—telegraph office being closed until 7 p. m.—went aboard and vaccinated the crew of 8, not including the sick man.

In the meantime Dr. W. F. Creasy, president board of health, Newport News, Va., came to see me, and informed me that the Bureau had been notified, and that instructions would be sent to me by the Bureau. Dr. Creasy, however, was rather undecided as to whether it was his duty to allow the patient to go to the pesthouse, and wanted to make a test case of the matter and have it settled. Late in the evening I was